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A PRESENTATION OF CAUSES

TENDING TO FIX THE POSITION OF THE

FUTURE GREAT CITY OF THE WORLD

IN THE

CENTRAL PLAIN OF NORTH AMERICA,

SHOWING THAT

*The Centre of the World's Commerce,*

NOW REPRESENTED BY THE

CITY OF LONDON,

IS MOVING WESTWARD TO THE

CITY OF NEW YORK,

AND THENCE, WITHIN ONE HUNDRED YEARS, TO

THE BEST POSITION ON THE GREAT LAKES.

By <sup>esup</sup> J. W. <sup>wakeman</sup> SCOTT.



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CITIES are organisms that grow up as naturally as men. They develop where human faculties are most effective, and because these faculties can be more effective there than elsewhere. Like men, too, they are mutually helpful. London could not have grown to become what she is without the aid of Birmingham, Manchester, Liverpool, and the other great cities in her neighborhood, and in other parts of the world. Proximity to these has given her, and sustained in her, more than one of the millions of her people. On the other hand, London has not failed to return to her sister cities the full measure of benefits received from them. As all the principal cities of the world contribute to the support of London, so do they all take tribute of her. Honest commerce gives forth equal benefits, and no commerce that is not honest can be permanently successful.

The earliest great cities were built by a race of men inferior to our own, to-wit: the Mongolian Chinese. Their means for commercial operations—navigable rivers and canals—though imperfect, enabled them to centralize commerce so as to build up cities containing a million or more of people; but, with insufficient unity of government and interest to draw commerce to one great centre. Subsequently, Caucasian and mixed races centralized commerce in their own limited dominions—on the Tigris, Euphrates, Nile, Ganges, and other navigable rivers. These were commercial centres, chiefly for the nations which made them their capitals; for, at that period, very little commerce between nations existed. The early cities of the Mediterranean sea were the first that were made centres of any considerable international commerce; and this was chiefly confined to the waters of that sea. The vessels in which it was carried on would make a poor show compared with the shipping now on our great lakes. In short, trade, in early times, was confined to very limited regions. It was local and isolated. Gradually, it has grown to be more general, and its leading centres have become more populous and powerful. Hamlets, villages, towns and cities have grown and competed for supremacy until, now, a centre for the commerce of the whole world challenges discussion.

Where will, probably, grow up the great cities of the future? I say, probably, for new elements may come into the calculation that are now unknown or unappreciated. I shall assume that a city is an organism, springing from natural laws as inevitably as any other organism, and governed, invariably, in its origin and growth, by these laws. I shall also assume, and endeavor to prove, that these cities are to be on the North American Continent, and not distant from the centre of the industrial power of this continent, *when well settled and its resources well developed.*

The growth of a city is analogous to the growth of a man. The first and greatest necessity of a human being is food. The next is clothing; after which comes shelter. Food, clothing

and houses. These are prime and essential requisites. There can be no civilized life without all of them. But these are products of labor and skill. Where can labor and skill be used to greatest advantage, in the production of these necessities? The solution of this question will go far to fix a natural location for a city.

But there are other necessities of *high* civilization, without which there can be no *great* city. There must be easy communication between it and other industrious and populous communities; good navigable channels, and, in our day, good road-ways over the land. There needs be cheap and quick means of transportation in order to effect that facile interchange of commodities which sustains high civilization. In discussing the question of the location of the future *greatest* city, it will be assumed that our continent will be settled by an industrious population and most densely inhabited where food and other primary needs are most certainly attainable.

It is a well-established fact that the centre of industrial power, as well as the centre of population, of North America, is moving steadily and inevitably westward of its former and present location; and it is not doubted that it will continue to move in that direction until it shall have approached the centre of the natural productive power of the continent.

The invention of the mariner's compass united, in a measure, the great continents, and brought all lands within the views of commerce. The earth was sailed around, and all its prominent characteristics became known. Slowly, at first, but faster and faster, the productions of different climates and different conditions of people were brought to shipping ports and exchanged. Now, the new and wonderful instrumentalities, steam and electric telegraphs, are making all peoples into one commercial family, and concentrating their commerce in great centres; as London, Paris and New York. It is a question of great interest whether one of these is to be the acknowledged heart and brain of the world's commerce; giving to the word commerce its widest signification. As yet, commerce has not become organized as a complete unit, and, therefore, has not a universally acknowledged central city; though its development, within the last fifty years has rapidly tended to centralization in the Island of Britain and the city of London. Paris is, and has long been, the acknowledged social centre of the world, due to its supremacy in the elegant arts and the amenities of high civilization. It has not been without controlling natural laws that London has become the principal centre of the world's commerce. If the various means of transportation are considered, it will be found that it is more convenient for the meeting of commercial products, exportable from all parts of the commercial world, than any other city; that is to say, it is more nearly *central* to the present commercial power of the world than any other *great* city. It is more central to the home commerce of the United Kingdom than any other commodious port. This is a great advantage, for the home trade of the British nation is very great; many times greater than its foreign commerce. It is central between the commerce of the Eastern and Western Continents, considering how greatly the magnitude of that of the Eastern exceeds that of the Western. *Will it remain central?*

There was a time when the island of Britain was on the extreme western verge of civilization and commerce, and, as said by Virgil, divided from the whole world besides. Since that time, the tide of men and commerce has moved steadily westward. That tide, in constantly increasing volume and rapidity of flow, continues to move westward. This continuing, the certainty of its reaching a better centre of commercial power than London, seems inevitable. But, to this end, it must cross the Atlantic. What are the indications that it will, on this side, find its destined place? If it is admitted that London must be superseded, what intelligent man will hesitate to name New York as the successful rival? Forty years ago—in 1828—London, with its numerous suburbs, contained about a million and a half of people. It has doubled its population since, making its period of duplication forty years. New York, with its dependent population included, by which I mean those supported by the business of New York, and having their residences in suburban places,

has now, in 1868, a population greater than London had, in 1828. New York appears to have a law of growth which doubles its population in from fourteen to sixteen years. If we allow London a future growth of two per cent. a year, and New York of five per cent., on a population of three million for the former, and half that number for the latter, the result will be in 1882, fifteen years from this time, that London will contain, in round numbers, four millions. New York will then contain over three millions. Allowing the same rate of increase up to 1893, the two cities will be nearly equal, New York numbering 4,849,387, and London 4,823,514. The United States, at that time, will contain over sixty millions of people; and the British Colonies, bordering the States on the north, will contain some eight millions. Together, sixty-eight millions. Long before that year, Eastern Asia, embracing the great Empires of China and Japan, with all the coasts of the North Pacific Ocean, will have become practically nearer to New York than to London, by means of railways across the American Continent.

The centre of commercial power moving westward will, somewhere, in time, be arrested. It will find a resting-place in North America; for it is not to be supposed it will, in its westward course, cross the Pacific to the inferior races of Eastern Asia. Nor is it likely to reach and make a lodgement at any port on our Pacific coast. The vast, arid and mountainous regions of the western half of the continent, and the unequalled extent of fertile lands on the eastern half, fix its location, inevitably, on the latter. Will New York, then, be the *permanent* emporium of North America and the world; or will its ultimate resting-place be westward of her position? The writer believes, after giving New York the leadership over London, the final supremacy among the world's cities, will settle on a place by the shores of the great lakes, central to the greatest industrial and commercial capabilities, and the greatest extent of fertile lands in the North Temperate Zone of the Globe. Chicago and Toledo have already demonstrated themselves to be the strongest commercial points on the Lakes; and, as their position is plainly the best for the concentration of land and water transport, a change to other places is not to be looked for. [See Appendix, A].

But, before entering on the consideration of the claims of an interior city to become, at some future day, the successful rival of New York, as the chief centre of the world's commerce, it will be in order to inquire on what grounds, besides the more rapid growth of New York in the past, it is claimed that it will become greater than London.

The main, the controlling reason is that it is getting an increasingly larger home trade than London, because our home population, now greater, is increasing nearly three times as fast. It has been demonstrated, on our railway lines, that the way-traffic between city and city, and station and station, in all the settled portions of lines of any considerable extent, greatly preponderates, in amount and profit, over the through traffic, even where the termini are great gathering points of commerce. No statistics at hand enable me to state what are the proportions of the home trade of New York, compared with its whole commerce, or what proportion of its population is supported by the home trade, and what portion by foreign commerce. If we estimate the proportion of the former to the latter as fifteen to one, it will not be over-stated. If this is so, then the forty million of people in the United States and British Provinces, making New York their principal commercial metropolis, will be equal, for advancing its growth, to six hundred million of outsiders, living in far off foreign lands. It is because population and wealth increases much faster in our country than in England, and, in consequence, its home trade is greater, that New York grows faster than London, and not because it secures a greater amount of foreign commerce; for, in that respect, London is, yet, far ahead of New York.

The indigenous commerce of the United Kingdom, which centres in London, may now be nearly as great as that of our States centering in New York, as the number of people sustaining it is about in the proportion of 29 to 38. The industry of our people, however, is more productive than that of the people of the United Kingdom, as statistics show a

duplication of our wealth in less than ten years, which is about half the time required for doubling theirs.

In the short period of twenty-five years allowed New York to become more populous than London, our numbers, now thirty-eight million, will have augmented to over seventy million; while that of the United Kingdom will only, at its normal rate of increase, grow up from thirty million to less than forty million. Before the end of that period the British Provinces, beyond our north boundary, will have become a part of our commercial system, if not a component part of our nationality. These Provinces will then contain nearly ten million of very industrious, hardy and intelligent inhabitants, swelling our number for the home trade to eighty million. Surely, in the light of all these considerations, it is not presumptuous or premature to forecast the superiority of New York to London, and its claim, in 1893, to be, more than any other city, the heart and brain of the commercial world. That a city of that character will, in the regular course of human events, exist, seems to me certain. That it will be developed on the Continent of North America, and, finally, rest on the best point on our great lakes, seems to me equally certain.

The Continent of North America has a remarkable depression between the Appalachian Mountains, on the east, and the Rocky Mountain ranges, on the west, and extending from the Gulf of Mexico, on the south, to the Arctic Sea, on the north. This constitutes *the great interior plain* of the Continent, and embraces most of the elements provided by nature to sustain the bulk of the population hereafter to inhabit the Continent. In all its immense length and breadth it is interrupted by no mountain barrier, and has, within its eastern portion, no barren waste. Almost everywhere, it is fertile and well-watered. To enable commerce among its people to be more rapid and cheap, it is provided with navigable rivers and lakes to the extent of tens of thousands of miles, and its unobstructed surface may be, everywhere, permeated by cheaply-made railroads.

The first and greatest necessity of man is food. At what point or points in the interior plain of North America, can this be obtained, in quantity to feed a large city, at the cheapest rate? It seems to be proved, by the results of the last twenty-five years, that the two most prominent of these points are Chicago and Toledo; as these have been the primary gathering ports of the greatest amounts of the most needful articles of food; and they seem to have such commanding positions for commerce, interior and exterior to our country, as to justify the claim to precedence over all others. The annual receipts of breadstuffs at these cities, for export, has, for several years, exceeded fifty million of bushels. At ten bushels to the individual, this would feed five million people. That number, therefore, in addition to their present population, could have been fed in these cities, at less cost than at any other place to which this grain was transported, by all the cost of that transportation. New York, Boston, and other far-off cities, consumed and distributed most of these fifty million bushels of food, and their various industries were sustained by it, at a cost of not less than ten million dollars beyond its value, in these interior cities. If these industries could have been carried on as well in Toledo and Chicago, as in New York and Boston, those engaged in them, in those exterior cities, lost the ten million in consequence of not being at the place where the cheapest bread could have been obtained. But, breadstuffs form but one article of necessary food. Next to them comes meat. It will be a moderate estimate to rate the animal food sent annually from Chicago and Toledo, and consisting of cattle, sheep, live hogs, dressed hogs, beef, pork, cut meats, lard, butter, etc., as amply sufficient to supply the five million people which their surplus breadstuffs provides for. These articles, valued at Chicago and Toledo, at twenty-five million dollars, probably cost the consumers, in the Eastern and European cities, not less than thirty-five million, making another ten million added to the cost of living in those cities that might have been saved, if the consumers had lived in or near these lake cities. These and other estimates are not designed to be exact, but sufficiently so to justify the position we take. Doubtless, many of the consumers, in Eastern

and European cities, can afford to pay this additional cost of food, in consideration of the more perfect organization of labor, and other advantages, in the older cities. If, then, we modify our estimate of the loss of the five millions excrecent population that are fed on far-fetched food, and make it half what is set down above, so as to reduce it to ten million, the truth will, probably, be closely approximated.

The speech of Hon. S. B. Ruggles, in the Canal Convention at Chicago, gives a striking view of the resources of the Lake States, in the production of human food. Does he not over-estimate the quantity they are likely to *export*? According to Dr. Chalmers "the bulkiness of human food forms one of those obstructions in the working of the economic machine which tends to equalize the population of every country with its food-producing power." Mr. Ruggles, by converting the corn (and he might have added the grass) crop into animal food, has, measurably, removed the obstacle of bulkiness to the extensive export, from the Lake States, to the more expensively fed population of other countries. Still the fact remains that the consumers of this animal food, and of the fifty million bushels of our breadstuffs, in Great Britain and in our Eastern States, year by year, must pay the cost of transportation, and profits, from Chicago and Toledo, over and above what would be the cost to them, if located in these cities. It is not too high an estimate to put this additional cost at thirty-three and one-third per cent. The persons that consume this food—laborers, mechanics, etc.—would act wisely by removing to the cities which, in other respects than cheap food, would afford them a better home than they now have. They will come to the great centres, where food is gathered in, and there pursue their avocations to better advantage than in the over-peopled country they leave. Mr. Ruggles is a far-seeing man, but he seems not properly to estimate the rapid growth of interior cities, and their ability, in consequence, to consume a large portion of the surplus of agriculture which is now so great. The lake cities, in position and climate, are unequalled for the advantages they offer the immigrant. They are central to the best regions of the earth, for the growth of the best fruits, grains and animals, to feed men; and, with these advantages, and a healthful climate, may claim to be the nurseries of the best men. The food, as heretofore, will attract to it the mouths to feed upon it. Labor *will* seek cheap food with good wages. It has always done so. The lake cities, although but germs of what they are to be, have exhibited, in their growth, the truth of this principle. No other commercial centres have been so rapidly peopled, in their early life. The attainment of cheap food has been the chief cause of this large increase. [See Appendix, B].

Next to food, as a prime necessity, comes clothing. The chief materials of this are wool, cotton, lint and leather, for all conditions of people. Wool and lint will be bought cheaper in the lake cities than in the Atlantic cities, and raw cotton as cheaply, in Chicago and Toledo, as at any leading eastern city. As the operative will be fed on cheaper food, the manufacturers of these articles will, for this and other reasons hereafter given, find these lake cities a good location for factories. Situated centrally to the best grass and grain growing region of the continent, Chicago and Toledo will, naturally, concentrate in their markets a large portion of the wool grown in the country. The production of flax and hemp will, probably, in proportion to its use, be as great within the commercial control of these cities as that of wool, the climate and soil being well-adapted to their growth. Cotton will, probably, in a few years, be grown west of the Mississippi, as largely as east of it, and will find its primary markets, in largest quantity, at Memphis, Vicksburg, New Orleans, and other favorable points on the banks of the western tributaries of the great river. From these cities it can be delivered to the manufacturer at Chicago and Toledo as cheaply as at the manufacturing cities of New England and New York.

In the climate where human brain and muscle have greatest activity and endurance, and where things called for by a high state of civilization can be brought together for use and exchange with least expenditure of time and money, the ultimate city of the human family

will be developed. In its early life it will be seen to grow rapidly, by reason of its facility to procure cheap food, clothing and shelter. These advantages continuing, and a higher life than a merely comfortable existence, procurable as well there as elsewhere, its growth will have no check, of long duration, but the law of progress, as shown in its first series of years, and decades of years, will, probably, be the law of its maturing growth, for a period not easy to estimate. [See Appendix, B].

The climate of the lake borders is invigorating and adapted to the best race of man. The breezes over the pure waters of these inland seas, and from the cultivated plains of Illinois, and the well-drained woodlands and fields of Ohio and Michigan, will possess more tonic power than the ocean winds, without their harsh characteristics. For healthfulness, the positions at the heads of Lakes Michigan and Erie, being elevated 600 feet above the ocean, are believed to be superior to that of New York. For transportation by water, in all directions, it may admit of question whether the advantage is on the side of the great Atlantic city or the rivals, hereafter to be developed, on the lakes. If New York claims to have all the oceans and their connecting navigable waters, the lake cities may claim that, before New York shall have brought the centre of the world's commerce from London, a good navigable passage for lake ships to the ocean will have been made, for the upper lake cities, so as to place them in a position to participate in foreign commerce. But, for *interior* commerce, which all concede to be far more important than foreign, the water channels, by lake, river and canal, which are immediately available for Chicago and Toledo, these cities have a great advantage over New York, for they extend in all directions, and have a natural concentration at these points. New York has only a water channel, for *interior* commerce, in one direction, to-wit: northward, up the Hudson River. This, with its entering canals, forms almost the only water-way it has for interior commerce. The commercial instrumentalities—railways and waggon-roads—may be made from Chicago and Toledo to nearly all points of the compass, almost without obstruction, for long distances. Railways are most naturally placed, and most profitably used, by the side of the best water-ways. Both these means of transportation seek the lowest levels, preferring to avoid the task of working against gravitation; commercial products, like other matters, choosing a down grade rather than an up grade. The Appalachian range of mountains separate a mere margin of our country, lying east of them, from the great body of our lands spread out westward. New York occupies a central position in this marginal section. Two low passes through the mountains—one by the Mohawk River, and the other by Lake Champlain—are the only routes, unobstructed by mountain ranges, which are open to her choice, to afford her railway communication with the body of the nation, west of the mountains. These passes form her best channels of land transport, as well as the only channels of water transport, with the great central plain. Placed on the ocean border, New York can only have a little more than half the land, within any given radius, from which to obtain trade, that Chicago and Toledo has. These cities command the lowest passage-ways between the lake (St. Lawrence) basin and that of the Mississippi waters. The summit-level of the canal and railroad connecting Toledo and Cincinnati is but 400 feet above these cities which are on the same plane. The Wabash canal and railroad which connects Toledo with the Wabash valley, rise but 200 feet above the lake in a distance of 110 miles, before they descend towards the centre of the Mississippi basin, by an almost imperceptible grade. The margin of the lake basin is but a few miles from Chicago, and rises but 24 feet above the lake. Towards these low valleys the commerce of the country naturally gravitates. Along these channels the commerce between the great interior river system and the great lakes naturally flows. The river cities, Cincinnati, Madison, Louisville, Evansville, Paducah, Cairo, Memphis, St. Louis, Alton, Quincy, Keokuk, Dubuque, Devanport, etc., will use these natural channels for their rapidly growing commerce with and through the great lakes. This advantage, alone, would secure to Chicago and Toledo pre-eminence among the lake cities.

Let us go back a little in our argument. Although London is now a greater centre of the commercial power of the world than any other city, it is only measurably so, in a unitary sense. The organization of society, *as one whole*, is yet too imperfect to call for the use of one all-directing head, and one central moving heart. In many things Paris claims pre-eminence, and many other cities exist almost independent of London. It will only be the *ultimate* great city that will fully unite, in itself, the functions analogous to those of the human head and heart, in relation to the whole family of man. That ultimate crowning city will be in the interior of North America. "Earth's noblest empire is her last," Berkley was a true prophet. The centre of commercial power will carry with it the centre of moral and intellectual pre-dominance. Its movement, controlled by nature's great law, is steadily westward. Its semblance, forecasting the future, has arrived in England, and exists in London. Thence, westward, it can find no resting-place until it reaches New York. That city will stand, for a time, the precursor, the herald, of the *final* great city of the world, which, within one century from this time, will have been established in the interior, where Chicago or Toledo now forms its nucleus. The same foreshadowing grounds of belief which compel conviction of the future pre-eminence of New York, exist, and are potent, in favor of the interior city, as compared with the Atlantic capital. One hundred years is allowed for the building of the world's commercial capital in the world's best region. One hundred years, at our previous rate of increase, will give four duplications, and six hundred millions. Allowing thirty-three and one-third years for future duplications, instead of twenty-five, and we have three hundred millions as the result. Of these, not less than two hundred and thirty millions will inhabit the interior plain, and the region west of it; and not over seventy millions will inhabit the margin, east of the Appalachians. What proportion of the two hundred and thirty millions will prefer to transact business with each other, by crossing the mountains together, carrying with them the articles to be exchanged, to New York, rather than to meet each other, at the most conveniently located city, in their midst? The productions of these two hundred and thirty millions, intended for exchange with each other, *will meet* at the most convenient point, central in time and cost, to their homes and exchangeable products. Where will that point be? Chicago and Toledo are believed to be the true claimants for this high destiny. Which of these has the best position to become the ultimate great city? In estimating the relative claims of these two young cities to have the greater future, no concession is made to the present popular opinion which would, without doubt, decide in favor of the larger city. I believe Toledo occupies a better position to become the ultimate city, time's noblest offspring. Some reasons for this belief are submitted. It seems, on examining the position of the two cities on the map of the United States, that Chicago is more central for gathering in north-western commerce. I concede this. If there were no counter-balancing power in the commerce of the States, east of Toledo, of the country east and north of the great lakes, and of the Atlantic, on all its extended shores, and a rival at the west end of Lake Superior, to come into the account, Toledo would not be thought of as a successful rival of Chicago. But, for many years, the centre of industrial power of the world will be, not only east of Toledo, but east of New York. As before remarked, it is endeavoring to establish itself in London. It will make a stronger and more successful effort to establish itself in New York. In thirty years New York will become the acknowledged successful rival of London. Within the next fifty years it will have established its superiority over all former rivals. It will, then, experience the effects of the inevitable law of western progress. The centre of the world's industrial power will be on its way westward of New York. After leaving that city, where will be its resting-place?

The centre of the population of the United States, in 1790, was in Maryland. It has since moved steadily in a direction north of west. [See Appendix, C]. In 1850 it was near Pittsburg. In 1860, it was in south-eastern Ohio. If the Provinces north of us are included,

the centre of population is now not far from Canton, Stark County, Ohio. If there were no ocean commerce to be taken into the calculation, Buffalo would now be nearer the centre of industrial power of our country, than any other city, having decided commercial advantages. When the centre of the industrial power of the world shall tremble in the balance, between New York and its western rival, Buffalo will be too distant from the great river commerce and the great railway concentration of the interior plain; and the centre of commercial power of the continent will be too far west of it. The movement of this centre of population and industrial power is, undeniably, in the direction of Toledo. Before reaching Toledo there is no position, on or near its movement, so favorable to a great concentration of commerce, as to arrest its progress and make it permanent. Cleveland will be the least distant, but her advantages are, obviously, less than those of Toledo. It will be conceded that, if the centre of the industrial power of the world ever leaves New York to establish a rival city in the plain, it will come as far west as Toledo. Will it move farther; and, if it does, will it rest in Chicago? The reasons for making Toledo its first and permanent resting-place are numerous. This centre of industrial power will, for many years, be nearer to Toledo than to Chicago. Two hundred and twenty miles, separating the two cities, will have to be passed over; and when, if ever, that distance is accomplished, Toledo will have the weight of commercial power on her side. All the time when this centre is approaching Toledo, from the east, and when, if ever, it proceeds so far west as to be nearer Chicago, the advantage will be with Toledo. A line drawn on the map, equi-distant from Chicago and Toledo, and bearing northward and southward, will, extended northward, cut Lake Michigan west of its outlet, and also west of the outlet of Lake Superior. Extended southwardly, it goes through Indianapolis and Nashville to Pensacola, on the gulf. All the country east of this middle line is nearer Toledo than Chicago, and so should prefer it as the concentrating point of its commerce.

It will be seen, on inspection of this line of equal distance, that it shows all the great lake waters, except Lake Michigan, nearer Toledo than Chicago: Lakes Erie and Ontario, by over 100 miles; Lake Huron, on the average of its shores, of some 200 miles, and Lake Superior about 60 miles. This is a great advantage, for the annual commerce of these lakes, (including Michigan), already, in its infancy, exceeds in value one thousand millions of dollars. It employs over two thousand vessels, aggregating nearly one million tons, transporting annually (as represented by ALVIN BROXSON, a high authority), twenty-eight million tons. This commerce will be duplicated several times before the period to which our investigation is carried; and its improved and ample water-way to the ocean will have been a long time in use. The interior navigation, furnished by lake waters nearer Toledo than Chicago, counting distance along the shores, measures more than four thousand miles.

From the line of equal distance, eastward, Toledo has nearer to her nearly all the Canadas, all the British Provinces east of the Canadas, two-thirds of the lower peninsula of Michigan more than one-third of Indiana, three-fourths of Kentucky, half of Tennessee, more than half of Alabama, nearly all of Florida, and all of the sixteen States eastward of those named above. Nearly all the great centres of business on this Continent lie within easier communication with Toledo, to-wit: Portland, Boston, Providence, New York, Philadelphia, Baltimore, Washington, Richmond, Charleston, Savannah, Louisville, Cincinnati, Cleveland, Detroit, Buffalo, Toronto, Rochester, Albany, Montreal, Quebec, etc.; while Chicago only has within its limits, (I say *its* limits, for it will be noted that I am dividing the future claim to final pre-eminence in the commerce of the world, between these embryo cities), New Orleans, Mobile, Memphis, St. Louis, Milwaukee, San Francisco, Sacramento, and many minor cities growing up rapidly on the Mississippi and Missouri rivers. Of ocean commerce, Toledo will have, on her side, that of the Atlantic, and Chicago, on her side, that of the Pacific. Supposing, then, these lake cities competing, in the final struggle, to become the world's central emporium of commerce, the balance of industrial power seems altogether



unlikely to gravitate so as to become more central to Chicago than to Toledo. What are the special claims of Chicago? First and greatest is a population eight times as large as that of Toledo, which, with the prestige, which its more rapid development has given it, has enabled it to concentrate capital and influence only to be equaled, by its rival, after a struggle of many years. It is nearer the great field of production of the precious metals. That portion of the commerce of the Pacific which crosses the Isthmus of Panama, and reaches the lakes through the Mississippi, will have a shorter route to Chicago than to Toledo. Up to this time, Chicago has had a great advantage over Toledo, in the more rapid development of the country brought within her commercial control, by being made the focus of the most perfect system of railways anywhere to be found in the world. These railways, traversing, for hundreds of miles, in several directions, fertile prairie lands, requiring but a minimum of labor to bring them under cultivation, have, in various ways, encouraged their occupation, so that they have already, to a great extent, reached the maximum of their products exportable through Chicago. Toledo, on the other hand, has been surrounded by a dense forest of timber, for hundreds of miles. The demand for timber is, now, opening this forest of rich lands to cultivation, with profit to the owners; so that, with the extension of railways in progress and about to be constructed, for the benefit of Toledo, a more even race with the prairie city may be relied on. Indeed, it will be strange if the woodland city does not soon exhibit decided proofs of a higher rate of progress.

We will now go back a little in our discussion to give additional reasons why New York will overtake and surpass London. For the first time in the enumeration of the people of the two nations, of which these cities are the commercial capitals, to-wit: in 1860 for the United States, and 1861 for the United Kingdom, the United States were ascertained to be the more populous. The increase of the United States, during the preceding decade, was 35 per cent.; that of the United Kingdom, 10 per cent. The aggregate increase of the United States was 8,251,445; of the United Kingdom, 2,249,355. At this time, 1868, the population of the United States exceeds that of the United Kingdom some seven millions. In the same decade, New York with her suburbs—Brooklyn, Jersey City, etc.—increased 50 per cent., in amount 520,888, while London, on a basis three times as great, increased but 440,798. The result of this decade represents fairly the law of growth of the two nations and their capitals. Cities, like individuals, have a law of growth that may be said to be constitutional and inherent. For instance: London develops numbers at about the annual average rate of two per cent., and New York, five per cent. These rates are, approximately, accurate for long periods, but not to be relied on for one year, or any short period of years. These remarks apply to the following named cities' rates of growth. They approximate the true law of their annual growth: Chicago, 12 1-2 per cent.; Toledo, 12 per cent.; Milwaukee, Detroit, Cleveland, Cincinnati, Buffalo and St. Louis, about 8 per cent. These cities are the principal places which can justly claim to be on or near the line of march of the centre of the industrial power of the Continent; and they do not fail to indicate, by their rapid growth, their claim to future greatness. More and more industrial power centres in cities. More and more these cities find their best positions, and, consequently, most rapid development, in a climate requiring and producing vigorous men. Most of the great cities of Europe are north of the 45th parallel of latitude; the modern and most thriving of them are above the 50th parallel. A similar climate in the United States, east of the Rocky Mountains, is found in the range between the 40th and 45th parallel. Within these we find our chief city development. [See Appendix, D]. Much error has prevailed respecting the merits of climate in the production and modification of the best plants and animals for the use of man, and, by their use, of the best race of men. Many suppose an equible climate, having the least deviation from a uniform temperature, is best for man, and the productions which go to make up human growth and social development. Others believe a *warm* climate, with moderate variations of temperature, most favorable to human happiness and political

power—a climate existing chiefly between the tropics and latitude 38. In the infancy of society, these views were more nearly correct than they are now. In the early stages of progress from a savage towards a civilized condition, a semi-tropical climate was, evidently, best calculated to enable the first steps to be taken towards a civilized condition. Tropical man, near the ocean level, lived with little need of exertion of body or mind. Fruit growing without his labor or care supplied him with food; clothing was not needed to guard him against cold. Little labor was required to give him all needed shelter. And so, there being no necessity to labor, or to invent, he lived, and he still lives, in a condition but a few grades above the beasts which surround him. The man of the warm climate, outside of the tropics, has need of more exertion and contrivance to save him from the pains of hunger and cold, and so he, from necessity, develops more active faculties, and becomes more of a man than the man of the tropics. Yet a moderate amount of exertion and contrivance serves his turn, and he progresses slowly towards a higher civilization. Next, above the man of a warm climate, comes the man of higher latitudes, and countries but little elevated above the ocean level; for example: the people living on the borders of the British Channel, the North Sea, and the Baltic. Their climate is, comparatively, equible, but has enough of the cold of winter and the heats of summer to make it necessary for them to put forth a larger measure of activity and contrivance to keep themselves comfortably fed, clothed and sheltered. The man of north-western Europe has made greater advances in power, by virtue of his necessities, and the blessings resulting from them, than the man of the lower latitudes, whose wants are less numerous and urgent. But he is not the best possible man. There is a climate which has the capacity to produce a better man. That climate is characterized, by Humboldt, as an *excessive* climate; and, also, as a *continental* climate. It is a climate of extremes of heat and cold, of very hot summers and very cold winters, accumulating during the cold of winter a nervous susceptibility in animals, and something analogous in plants, which enhances the effect of the great summer heat, in the evolution of vegetable growth and of animal activity and power. It is believed to be historically true that the best race of man, and the plants and animals best adapted to maintain his superiority, originated in a continental climate, having a great range of temperature. When he has changed his residence and made a new home, in hot or equible climates, he has, uniformly, deteriorated in character, and it has been, only, when he has migrated to a climate like that of his origin that he has made the best progress in civilization and true manhood. The elevated regions of this excessive climate, in the middle latitudes, are believed to be the best for this race of men. North America affords a larger area appropriate for the developement of this race, than the Eastern Continent. In this continent will be brought together the largest and most active portion of this race, and on its great interior plain will grow up the greatest aggregation, the greatest nation, the last and noblest empire of man. Its climate gives the greatest nervous and muscular power to man, and the animals best adapted to his wants. It enables him to grow the greatest variety of best cereals, the best fruits, and the best animals for his use, as well as the best material for his clothing and shelter. No other region of the globe, of like extent, can equal it, in its capacity to produce the best fruits adapted to the health and enjoyment of the best race of men. Humboldt, in his "Aspects of Nature," testifies to the superiority of the grape grown near Astrachan, in the excessive climate of eastern Europe, near latitude 46 degrees, over the best table grapes of Spain, Italy and France. The best apples and pears in the world, originating in accidental seedlings due to the climate, are grown in the United States. There are small portions of interior Europe and Asia in which the continental climate may equal, in life-giving power, the best portions of the United States, but their inhabitants are less advanced in knowledge, and, as a whole, are decidedly inferior in strain of blood. They are also less favorably placed for commerce, external and internal; and they live under inferior political organizations. The best climate and soil for the best race of men in North

America are, in extent, ample for the support of all of that race now living, and all its augmenting numbers for centuries to come. It contains, also, climates and soils adapted to the constitutions of other and inferior races. The black race not only has health and a rapid increase, in the warmest portions, but it improves in moral and physical condition; and there are considerable sections where Asiatics, Mongolian and Malay will probably find a convenient resting-place. The rapid movement, in the direction of unity of the commerce of the human family, is not inconsistent with diversity of race, location and occupation, but is in accordance with them. Two modern agents—steam and electricity—greatly favor the movement, and we may confidently expect, not only a great extension and improvement of these agents, but the introduction of others of still greater potency. More than ever before, the future is pregnant with great events. Even the next generation may cease to wonder at the advances in power of their fathers, in the much greater progress of their own time. With the present agencies, and in the present inchoate condition of the unitary progress of the world's commerce, London comes nearer being its heart and brain than any other city. Until New York becomes nearly as populous and rich, she cannot hope to give the chief impulse to the world's commerce. But, so surely as the laws of nature vindicate themselves, in the production of their recognized effects, so surely will New York supercede London. Before the year of grace, 1900, thirty-two years from this time, New York will commence her career as the world's queen city. How long will it be before one or more of her western children will dispute her queenship and dethrone her? Let us calculate the progress of the western movement of empire. Let us estimate the increase of population and wealth, as it flows westward, and learn, approximately, where will be the centre of its power, in 50 years, in 75 years, in 100 years. As a basis of this calculation it may be well to note some principles and facts, either self-evident or too well established to need proof. *Commerce will meet to exchange equivalent values at the place most accessible and convenient.* This principal applies as well to continents as to neighborhoods. It is a fact that home commerce, in every civilized nation, is many times more important and multiplied in its transactions, than foreign commerce. This predominance, in amount and value, in countries of great extent and diversified productions, is great in proportion to range of climate and capacity to produce articles of commerce; and the disproportion increases with the increase of civilization and accumulated wealth. Let us apply these principles. New York, within this nineteenth century, is to become, more than any other city of the world, the centre of industrial power. What will then be the status of Chicago and Toledo? [See Appendix, B].

The population of the whole country, including the British Provinces north of our boundary, will exceed eighty millions, A. D., 1900. To bring it up to that number will not require a progress as rapid as the average rate, since 1790. Of this number, fifty million, at least, will be nearer Toledo and Chicago than to New York. If foreign commerce were out of the question, the principal exchanges of the country would be made in Toledo, rather than in New York, for the plain reason that they could be made quicker and cheaper. But New York will then be nearer Europe and all the commerce of the Atlantic, south of Quebec. The comparison will stand as follows: Toledo, with the advantage of being the more natural centre for fifty million, at home, and New York with the special advantage of, say four hundred million of foreign population, distant from one thousand to twenty thousand miles. Supposing the home trade to be worth fifteen times as much, in proportion to population, as the foreign commerce, the excess of twenty million of people, in favor of Toledo, will equal three hundred million of foreigners, nearer New York. As the result of the comparison, New York would possess the advantage which one hundred million of foreign population would afford her, and the greater advantage of having already the capital and other appliances to perform the duties of chief city of the world. What portion of the foreign commerce may fall to the share of the interior city before the year 1900, cannot be estimated,

and, for that reason, is left out of the comparison. It is not claimed that Toledo will endanger the leadership of our great Atlantic city in 32 years. How will they stand in 50 years—Anno Domino, 1918? Before that year there will be several Pacific railways spanning the continent, and several large cities on the Pacific side of the continent, gathering in the commerce of the north Pacific, and prepared to carry on a great commerce with the leading cities of the interior plain, and of the Atlantic border. The commerce, gathered in the Pacific cities, will meet, somewhere, the gathered commerce of the Atlantic, centered chiefly in New York, Boston and Quebec. The best portions of Europe and Asia will strike hands over our continent. Where will be the place of their meeting? Will it be New York? Our home commercial system will then embrace about one hundred and thirty million. Of this number, there will live not less than ninety-five million nearer Toledo than to New York; and some thirty-five million nearer to New York; giving an excess of home population of sixty million in favor of Toledo, equal, in commercial power, to nine hundred million foreigners. New York will not then monopolize our foreign commerce. All the commerce commanded by the Gulf of St. Lawrence and Hudson's Bay, may be more conveniently brought into connection with Toledo. There will, then, be the Pacific commerce, in the track of which, between the two oceans, Toledo and Chicago will be situated. It is not for us to know what extension of the commerce of eastern Asia with the United States will take place, in the coming fifty years. It seems probable that there will be a large migration from Japan, China, and possibly India, to the western coast of our country. Our undeveloped resources call for all the labor and skill which can be brought from the over-peopled lands of Asia and Europe. Hunger is an imperative master which will bring to the land of plenty many millions now suffering under its power. It would be to leave an important element out of the calculation, not to give much weight to the effect this anticipated migration of the Asiatics may have in determining the position of the great central city of 1968; or, indeed, of the city of 1918. The coming 50 years will probably do more for the concentration of the world's traffic than all the years of the past. It is but 61 years since Fulton demonstrated the practicability of using steam, as a motive power, in navigation, and it was not till many years after that it became much more than an experiment. Now, all waters are witnesses of its triumphs. Steam-propelled cars and ships will, before the 50 years will have passed, bring within their power the great body of the world's commerce, and cause all races of men to fraternize, in commercial transactions. It is but 40 years since the first locomotive on a railway (the Liverpool & Manchester) proved its power to draw, with much speed, a train of cars. Three years will scarcely pass away before it will triumph over the Rocky Mountains, in its passage across the broad continent of North America. It is not unreasonable to anticipate that an iron or steel track, for its use, will, before the end of fifty years, bestride the great Eastern Continent from the North Sea and British Channel, around which the commerce of Europe centres, to the Yellow Sea of the Pacific, the central sea of the commerce of eastern Asia. It is quite evident, even now, that *commerce moved on land will, very soon, be vastly greater than commerce moved on the water*, though the means by which both are carried on will be greatly improved. In large portions of our continent, every acre may furnish food for land commerce, whereas, the oceans and great seas are almost waste places, in the lack of means to furnish commercial equivalents. Until a few years past, transportation, by land, has been so slow and costly that countries bordered by navigable waters possessed great advantage of intercourse over interior lands, and, in consequence, almost monopolized the world's great commerce. A revolution is now in rapid progress that will change the relations of these localities, and give to interior positions a controlling advantage over those on the ocean borders. As yet, few persons seem to appreciate this great revolution, in its power to change the places best for concentrating the world's commerce. Chicago and Toledo unite, in a marked degree, the advantages of both land and water transport. The coasts of the great lakes, some 5,000

miles in extent, offer a large field for home navigation, and the certainty of a commodious water channel, connecting them with the ocean, insures to them advantages of navigable intercourse with the outer world. When the fertile lands around them become densely filled, with an industrious and intelligent population, it is difficult to imagine impeding causes that can prevent them from becoming the great centres of the trade of our continent. The probability of the attainment of such high destiny will, when known, induce men of intelligence to select for themselves and families homes in and near these cities. The climate for pleasantness and health, is among the best east of the elevated and barren plateau of the Rocky Mountains. Each has, on the borders of its home lake, a fruit climate and soil not excelled, if equaled, east of that plateau.

It is difficult for many persons to bring their minds to contemplate, as possible, a future differing materially from the present and the past. It is only those who have studied the course of human progress, and its tendency towards a more perfect society and a more general union of races, in commercial operations, who can appreciate, at their proper value, facts and arguments that go to show results differing from and greater than any heretofore manifested. As men become more enlarged in their views, and have a truer comprehension of the laws governing matter and mind, they become fitted to more extended relations with their fellow-men. It is the same with societies and nations. They have more and more points of friendly contact, so that tribes grow into nations, and nations are enlarged to embrace all homogeneous races. As nations interact and mingle, international amenities ripen into a feeling of brotherhood, so that it is only following out the course of events to anticipate, as the crowning result, one great centre—one city of the world—which shall be the acknowledged focus and radiating point of its wealth, intelligence and moral power. Such cities London and Paris are striving to be, and, in a qualified degree, are. They will approach that condition, when, in a few short years, there shall be communication by connecting telegraphy with all quarters of the globe, so that people the most distant may hold daily intercourse with each other. These cities, for a time, will remain the world's acknowledged chief centres of thought and action, and with increasing power.

But events in our time evolve rapidly, and, especially, in city growth. In a period of not more than half a century, the western movement of population and wealth, in one swelling tide, will have increased the power of the chief city of the Western Continent to a degree enabling it to overshadow the greatest European capitals. London and New York have each an established rate of increase, as proved by successive enumerations, in each decade of the current century. LONDON has grown at a rate that doubles its number once in 40 years, commencing in 1801. Carried forward through three duplications, it exhibits the following results: 1801, 958,863; 1841, 1,911,726; 1881, 3,835,452; 1921, 7,670,904. NEW YORK, commencing, in 1800, with 60,489, has, with its dependent suburbs, doubled its numbers, on an average, in 15 years. Carrying that rate of increase up to 1920, its numbers will be 15,484,784. This will be considered an incredible result. With present and improving means of communication, the ability to grow and support great cities, as the country becomes populous and rich, must be admitted. Even with present means of transit, the outer boundaries of city and suburban residences extend tens of miles from the business centre of New York. A radius of fifty miles will not be too extended to embrace, before the end of the present century, the people drawing their chief support from the city. Within two hour's time all within that radius may be carried to or from the chief business centre and their homes; most of them within one hour. There is nothing, therefore, *in the greatness of this number*, to warrant distrust of its attainment. If its growth shall be checked, it will not be because our cities, *generally*, will receive a smaller proportion of our population than heretofore. It were easy to prove that the proportion will be increased. If New York fails of its proportionate growth, it can only be because a western rival is gaining, at her expense. The movement of men and money, in a constantly broadening and deepening

current, from the Atlantic States, westward, into the interior of our continent, compels us to anticipate a successful rival, to grow up within that broad plain embracing the basins of the St. Lawrence and Mississippi, and the country north of them. We are also compelled, by the evidences furnished during forty years, of the power of lake cities to concentrate the commerce of the great plain, to believe them destined to dominate the location of the great interior city. More and more they have drawn trade from the great river valleys of the plain, proving the superiority of their position to that of cities on the borders of the great rivers. The general direction of the lakes being east and west, and so in the line of the great commerce of the world, gives the cities on their borders, placed in or near this line, very great advantages over all others. [See Appendix, D].

It does not seem unreasonable to expect Toledo to continue, for many years, to grow as fast, in proportion, as it has since 1810, when its first census was taken. From that time it has labored under many disadvantages which are either no longer operative, or are being removed. For years, the few country people, depended on for its support, weakened by fevers, incident to a new country, had very little surplus with which to trade. The new city was sickly, and was reputed to be so in an extraordinary degree. It had, as rivals, on all sides, towns of better reputation and larger size. It had to overcome, under these and other disadvantages, the rivalry, one after another, first of its nearest neighbors, and, afterwards, of its more remote. These rivals, Perrysburg, Maumee, Monroe, Adrian, and Sandusky City, were, comparatively, old and established places of business before Toledo existed. Now, and hereafter, it has for reputed rivals, Detroit, Cleveland, Cincinnati and Chicago. Under all these disadvantages, it has increased, in the aggregate of the thirty-eight years, over 12 per cent, annually. There appears to be no reason to expect a lower per centage of increase for many years, hereafter. As aids to its growth it will have not only the direct trade of farmers, as at first, but of villages, towns, small cities, and, ultimately, of large cities. It is thus that cities of great inherent merits of location grow faster as they grow larger, and, with recently invented appliances, all aid each other. There is not any necessary antagonism. It is best for all that each should avail of its inherent advantages, and so all flourish together. There are abundant resources for all. Jealousy and antagonism are unwise, for they react and injure where they design to benefit. The better city may not be moved to us, but we may move to it. The choice is open. There is room in the best localities as ample as in the poorest.

The day may come when steam-propelled canal-boats will connect the commerce of the Ohio River, at Cincinnati, with that of the Lakes, at Toledo; and, also, the commerce of the Mississippi, at Rock Island, with that of the Lakes, at Chicago and Toledo. The time may be fairly anticipated when an improved railroad, little over two hundred miles in length, will bring the railway commerce of Chicago in connection with lake transportation to the harbor of Toledo. It is only a question of the relative cost of freight, by 220 miles of railway and 700 miles of lake.

The day will surely come when Toledo and Chicago will have a good water-way, for lake vessels to the ocean, and by more than one route. Three new routes are practicable. That from Buffalo, by enlarging the capacity of the Erie Canal; from Oswego to Albany, occupying the same route along the Mohawk; and that by way of the St. Lawrence, the Caughnawaga Canal, to Lake Champlain, and thence to Albany. These are all practicable, without great cost. The route now in use, by way of the Welland Canal and St. Lawrence, to Montreal, needs only a moderate enlargement of its locks and canals to allow the passage of large propellers between the upper lakes and the ocean.

If it is true that the movement of human power is so surely westward as to make it reasonably certain that New York will become greater than London; if it is true that this movement will carry a great preponderance of numbers and wealth into the great central plain; if it is true that the home commerce of the continent, moved on land and water,

is now greatly in excess of its foreign commerce, and constantly increasing in proportion; if it is true that this home commerce concentrates more and more in cities of the interior plain; if it is true that the lake cities concentrate this home commerce more than the river cities of the plain; if it is true that, of all the lake cities, Chicago and Toledo grow faster, by virtue of their power to bring to themselves a greater primary commerce than any other lake cities; if commerce by land is becoming much more important, in our country, than commerce by water; if all these are true facts, does it not follow, as surely as the day succeeds the night, that the great city of the future will be in our great interior plain; and, with reasonable certainty, may it not be anticipated that Chicago or Toledo will be that city?

Is it because Chicago is further West than Toledo and so commands a larger extent of country, in that direction, that it has so far out-stripped its sister of Lake Erie? or is it owing to some other cause than the superiority of position? Is not the *sufficient* cause found in the facility of opening land to cultivation afforded by the inviting prairie on all sides of the former, and the difficulty of divesting the soil of the heavy forest surrounding the latter? To test the relative merit of the *position* of these cities respectively, let us suppose Chicago to have been surrounded by a dense forest, and the whole country within the reach of its natural commercial command, like that which surrounded Toledo in 1832; which, in that condition, would now be the greater? Does any one doubt that it would be Toledo? Again; let us imagine Toledo, at that time, surrounded by a region of prairies, like that of Chicago; so that, the merit of position, alone, had determined their relative growth. Can there be a doubt that Toledo, now, would be the greater city? It is, then, the prairies, *only*, which has given Chicago the preference. It is, then, the forest that has retarded the growth of Toledo. What will be the effect of prairie and forest, on these cities, hereafter? The prairies will, to a large extent, be monopolized by large holders, be cultivated by machinery, and so be sparsely inhabited. The forest impediment to cultivation will, every year, grow less. Already, in considerable portions, its removal is a source of profit. It is becoming an important source of revenue. It is being divided into small holdings and, so, increasing in density of population.

If, now, the *position* of Toledo has been inferior, *only*, because of the advantage to Chicago of her prairies; that inferiority is being removed and becomes a superiority, when, in addition to the advantage of having the ground, in sufficient quantity, opened for use, there remains a valuable supply of timberland, interspersed and available, for the various purposes of advancing art in city and country, at home and for export, abroad.

And, now, may it not be justly claimed that, the westward movement of human power will, much within one hundred years, bring the world's great centre of commerce to New York, and, if to New York, then to an interior city,—if to an interior city, then to a lake city,—and, if to a lake city, then to Chicago or Toledo, as the natural advantages of position shall finally prove more powerful to favor the one or the other.

One hundred years! What may we not hope of developement in that period; long, if measured by the duration of human life; short for the life of a nation, and very short in comparison with the life of the human race. Looking back one hundred years, we find that some 4,000,000 of population of British Colonies, have grown to 40,000,000. New York, then, was about two-thirds the size of Toledo, now. Our city population has increased more than thirty fold. Our wealth has increased faster than our cities. One hundred years to come, with the command of steam, electricity, and we know not what other and superior agencies for wonder-working, can scarcely fail to produce results of a magnitude beyond the power of the most vigorous imagination to conceive. The cities of western Europe are grand out-growths of modern improvements, but they will be deemed, in their present condition, rude and small, in comparison with the vast emporiums which, in one hundred years, will grow up on our continent.





## APPENDIX A.

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### COMMERCE OF TOLEDO AND CHICAGO.

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The following tables will enable the reader to make comparisons as to the business in some branches of trade of our interior cities, and show plainly that the great current is by the lake route, and not by the Mississippi waters.

The following remarks and tables are from an official canal document, and may be relied on as correct :

Just in the same proportion that you cheapen transportation you are enabled to extend the boundaries of the region from which your surplus productions may be drawn to a remunerative market. This fact has already enabled our enterprising merchants to penetrate the interior to such an extent that we have demonstrated our ability, by artificial water communications, and the great lines of railroads running between the East and the West, at present, to compete successfully with the great natural outlets which drain the valleys of the St Lawrence, and the still more fertile valley of the Mississippi.

The interior of this continent is the region where, hereafter, power—political, commercial and social—is to be felt in the whole administration of the Government.

Over five hundred million of dollars have already been expended in opening lines of railway communication between the food-producing region of the West and the Atlantic seaboard. This sum is independent of the amount expended in the construction of the Erie and Oswego Canals, upon which has been borne the great proportion of all the products of the West, seeking a market in the East.

The completion of the Erie Canal first stimulated a trade that has since attained such gigantic proportions.

From an able statistical article, prepared by H. V. Poor, Esq., Secretary of the Pacific Railway Company, we learn that, as late as 1837, the number of tons of western produce, reaching tide water through the Erie Canal, was only 56,225. In 1861 it had increased to 2,156,000. For the present year, 1862, it will probably reach more than 3,000,000.

The following table will show the ratio of this increase up to 1860, with the cost, including tolls, of transporting a ton of merchandise from lake Erie to the Hudson: [It has increased greatly since 1860].

YEARS.	TONS WESTERN PRODUCE COMING TO TIDE BY ERIE CANAL.	Cost per Ton.	
		FROM ALBANY TO BUFFALO.	FROM BUFFALO TO ALBANY.
1837.....	56,255	\$20 00	\$9 15
1838.....	83,233	18 00	7 50
1839.....	121,671	17 80	6 76
1840.....	158,148	17 80	6 44
1841.....	224,176	16 60	7 50
1842.....	221,477	12 20	6 57
1843.....	256,376	13 20	6 02
1844.....	308,025	11 20	5 56
1845.....	304,551	13 00	5 56
1846.....	506,830	9 60	6 57
1847.....	812,840	8 00	5 92
1848.....	650,154	7 80	7 13
1849.....	768,659	7 80	5 37
1850.....	773,858	7 80	5 18
1851.....	966,993	7 20	5 48
1852.....	1,151,978	6 20	4 71
1853.....	1,213,690	5 20	4 90
1854.....	1,100,526	5 60	5 18
1855.....	1,092,876	5 00	4 81
1856.....	1,212,550	5 00	4 81
1857.....	919,998	5 40	5 56
1858.....	1,273,099	4 80	4 26
1859.....	1,036,634	2 80	3 14
1860.....	1,500,000	2 40	2 87

Of the tonnage of the Canal, delivered at tide-water, in 1860, 1,367,563 tons were cereals, and 12,524 tons animal food. The Erie and Central Railroads, the same year, brought to tide-water 425,185 tons of animal, and 540,000 tons of vegetable food; almost the whole of it the product of the West. The value of the vegetable and animal food, of the three lines, was equal to \$178,000,000. The other great lines such as the Ogdensburgh, Pennsylvania, Baltimore and Ohio, swelled the aggregate value to at least \$225,000,000. Against this volume of trade the New Orleans *Pike Current* makes the following statement, showing the total exports, coastwise and foreign, of produce from that port, for 1860, the year before the navigation of the Mississippi was interrupted.

EXPORTS TO	FLOUR,	PORK,	BACON	LARD,	BEEF,	CORN,
	BBLS.	BBLS.	CASKS.	BBLS.	BBLS.	SACKS.
New York.....	10,862	868	271	9,948	9,878	37,243
Boston.....	41,524	2,097	91	1,061	1,699	22,410
Philadelphia.....	.....	.....	.....	260	10	.....
Other Coastwise Ports.....	217,931	45,572	28,565	7,396	3,019	498,916
Great Britain.....	6,341	89	.....	7,846	5,495	52,448
Cuba.....	6,478	1,307	1,461	37,380	735	27,065
Other Foreign Ports.....	74,115	3,120	805	6,461	863	14,288
TOTAL.....	386,511	53,050	80,693	70,852	21,699	652,370

The St. Louis *Price Current*, of December 31st, contains the subjoined statement of the receipts at that port for the year 1861, 1862 and 1863. The exports are not given; to estimate their amount it will be necessary to deduct what would be used for consumption, by the city.

	1861.	1862.	1863.
Cotton, bales.....	.....	38,430	27,500
Tobacco, hhds.....	8,510	33,050	19,330
Hemp, bales.....	38,568	78,317	55,267
Lead, pigs.....	114,250	95,800	78,811
Flour, bbls.....	1,178,110	1,554,279	1,407,668
Wheat, bushels.....	2,651,278	3,850,335	2,703,378
Corn, bushels.....	4,515,000	1,734,210	1,299,850
Oats, bushels.....	1,735,157	3,135,043	2,771,848
Pork, bbls.....	116,445	51,187	35,300
Pork, casks and tierces.....	11,352	6,615	4,130
Pork, boxes.....	6	3,530	2,155
Pork, pieces.....	751,813	487,580	610,789
Bacon, cks.....	11,780	10,833	7,070
Bacon, bbls. and boxes.....	10,820	10,352	8,700
Bacon, pieces.....	106,000	106,315	40,480
Lard, tierces.....	27,231	19,407	16,600
Lard, bbls.....	12,837	24,975	22,976
Lard, kgs.....	11,815	5,993	2,735

#### TAKEN FROM ANNUAL STATEMENT OF EXPORTS OF ST. LOUIS AND CINCINNATI.

BY W. W. BAKER.

1858.	CINCINNATI.	ST. LOUIS.
	BUSHELS.	BUSHELS.
Barley.....	400,967	406,000
Corn.....	1,090,236	900,000
Oats.....	598,950	1,690,562
Rye.....	61,358	46,194
Wheat.....	1,211,543	3,835,759
Flour, reduced to wheat.....	3,169,590	1,861,196

#### FLOUR AND GRAIN.

The following will show the comparative receipts of Flour and Grain at the following named places for five years :

##### NEW YORK.

	1861.	1862.	1863.	1864.	1865.
Flour, barrels.....	4,968,971	5,384,872	4,574,059	4,147,500	3,687,775
Wheat, bushels.....	23,129,135	29,280,629	17,937,858	13,078,540	9,161,435
Corn, bushels.....	20,725,166	18,518,799	14,243,599	7,254,595	15,552,843
Oats, bushels.....	4,852,009	5,435,016	11,076,035	11,480,805	8,739,600
Barley, bushels.....	775,762	957,729	2,143,485	2,313,865	2,994,810
Rye, bushels.....	1,834,301	1,875,615	430,507	486,395	884,135
TOTAL GRAIN, BUSHELS.....	51,616,373	56,067,788	45,831,542	36,614,200	37,339,903

##### BUFFALO.

	1863.	1864.	1865.
Flour, barrels.....	2,978,089	2,028,530	1,780,393
Wheat, bushels.....	24,240,348	17,677,540	12,437,888
Corn, bushels.....	20,086,951	10,478,681	19,840,901
Oats, bushels.....	7,332,187	11,682,637	8,484,798
Barley, bushels.....	611,449	465,057	820,563
Rye, bushels.....	422,309	635,727	817,672
Peas, bushels.....	131,820	96,845	61,397
TOTAL GRAIN, BUSHELS.....	49,845,065	41,041,196	42,473,223

## CHICAGO.

	1861.	1862.	1863.	1864.	1865.
Flour, barrels.....	1,446,137	1,663,391	1,536,691	1,148,471	1,186,551
Wheat, bushels.....	17,531,909	13,728,116	11,181,344	11,570,493	9,465,618
Corn, bushels.....	26,543,233	29,499,323	26,450,508	13,596,205	25,125,638
Oats, bushels.....	1,883,258	4,138,722	9,139,525	14,404,395	10,337,899
Barley, bushels.....	896,134	1,910,878	1,098,346	774,499	1,595,774
Rye, bushels.....			839,760	901,242	1,163,609
<b>TOTAL GRAIN, BUSHELS.....</b>	<b>54,093,219</b>	<b>57,558,950</b>	<b>48,708,483</b>	<b>40,836,834</b>	<b>47,691,018</b>

## MILWAUKEE.

	1861.	1862.	1863.	1864.	1865.
Flour, barrels.....	492,259	529,600	453,747	295,225	372,925
Wheat, bushels.....	15,930,706	15,613,955	13,974,039	9,147,274	11,859,242
Corn, bushels.....	114,931	258,456	359,052	460,575	276,714
Oats, bushels.....	131,256	287,765	949,564	1,055,844	649,485
Barley, bushels.....	140,439	296,573	206,513	198,325	149,722
Rye, bushels.....			162,623	88,541	137,259
<b>TOTAL GRAIN, BUSHELS.....</b>	<b>18,778,627</b>	<b>19,104,719</b>	<b>15,651,687</b>	<b>10,950,659</b>	<b>13,072,636</b>

## TOLEDO.

	1861.	1862.	1863.	1864.	1865.	1866.	1867.
Flour.....	1,406,476	1,585,335	1,126,266	1,052,474	1,068,102	736,207	668,604
Wheat, bushels.....	6,277,406	9,827,629	6,194,130	7,237,092	4,731,803	1,812,899	2,150,875
Corn, bushels.....	5,312,038	3,813,709	1,705,096	1,041,760	1,613,065	4,439,908	5,747,005
Oats, bushels.....	41,428	234,759	733,796	454,254	845,001	1,218,279	1,038,293
Barley, bushels.....	43,257	167,506	27,608	74,681	413,037	102,850	48,399
Rye, bushels.....			24,529	39,435	78,141	319,864	223,474
<b>TOTAL GRAIN, BUSHELS.....</b>	<b>18,706,510</b>	<b>21,910,228</b>	<b>8,695,159</b>	<b>8,846,623</b>	<b>7,711,648</b>		

The annexed table shows the total value of Exports and Imports of Toledo, for each of the following years :

	IMPORTS.	EXPORTS.
1858, total value.....	\$ 31,700,085	\$ 35,460,031
1860, " ".....	46,727,754	52,243,627
1861, " ".....	81,180,366	95,905,758
1863, " ".....	158,967,010	177,547,671
1864, " ".....	161,652,597	181,329,496
1867, " ".....	167,586,626	185,145,096

## DETROIT.

	1863.	1864.	1865.
Flour, barrels.....	1,081,293	825,537	848,138
Wheat, bushels.....	2,222,660	692,669	1,497,197
Corn, bushels.....	356,205	227,417	467,773
Oats, bushels.....	656,496	351,758	394,561
Barley, bushels.....	288,253	151,411	219,608
Rye, bushels.....	17,344	9,613	24,202
<b>TOTAL GRAIN, BUSHELS.....</b>	<b>3,438,048</b>	<b>1,432,865</b>	<b>2,613,380</b>

## EXPORTS OF CINCINNATI.

	1862,'63.	1863,'64.	1864,'65.	1865,'66.	1866,'67.	TOTAL VALUE EXPORTS.	
Corn, sacks .....	265,934	435,260	342,553	385,843	549,942	1865, '66.	1866, '67.
Oats, bushels .....	937,139	851,392	1,739,676	147,091	295,822		
Wheat, bushels .....	1,232,967	943,737	686,893	873,775	972,982	\$211,850,000	\$192,929,317
Flour, barrels .....	405,570	393,268	436,186	514,450	412,068		
Cotton, bales .....	45,998	79,486	89,485	152,061	141,250		
Rye, bushels .....	25,115	24,340	15,000	21,381	106,319		

## EXPORTS OF CHICAGO.

	1862,'63.	1863,'64.	1864,'65.	1865,'66.	1866,'67.
Corn, bushels .....	29,452,610	24,906,934	12,740,543	25,228,526	32,953,530
Oats, bushels .....	3,112,366	9,909,175	16,470,929	10,598,061	9,564,223
Wheat, bushels .....	13,808,898	10,759,152	10,249,330	8,098,968	10,341,549
Flour, barrels .....	1,739,849	1,507,816	1,287,545	1,523,786	2,197,787
Rye, bushels .....	871,796	683,946	683,946	1,022,200	1,489,895

The following are the routes by which the Grain Exports of Chicago, for the year 1867, were carried :

	FLOUR, BARRELS.	WHEAT, BUSHELS.	CORN, BUSHELS.	OATS, BUSHELS.	RYE, BUSHELS.	BARLEY, BUSHELS.
By Lake .....	481,491	5,827,846	31,451,885	7,395,113	1,029,629	988,240
By Canal .....	218	235,758	.....	99,132	3,586	60
By Western and Southern Railroads .....	130,522	908,085	243,513	158,314	29,219	111,657
By Eastern Railroads .....	1,554,776	3,605,618	1,452,162	1,911,764	427,461	398,371

## APPENDIX B.

In deducing, from their past history, the law of growth of our cities, it must not be inferred that it has no limit of time and numbers. It is evident, when cities grow much faster than the country which contains them, that they will reach a limit at which their progress will be slackened, and, finally stopped. In a fully developed country, the cities will contain more than half the people. It is obvious that a time will arrive when both country and city will have obtained their maximum of population. We may fairly expect longer life for the cities of our great plain, and a longer continuance of the law of growth manifested in their early life, than for the cities of old and well-developed countries. They should grow rapidly, as long as the country which sustains them grows in numbers and wealth.

From 1840, when the first census of Chicago and Toledo was taken, their average period of duplication has been five years for the former and six years for the latter, thus:

TOLEDO.		CHICAGO.	
1840 .....	1,220	1840 .....	4,470
1846 .....	2,440	1845 .....	8,940
1852 .....	4,880	1850 .....	17,980
1858 .....	9,760	1855 .....	35,960
1864 .....	19,520	1860 .....	71,920
1870 .....	39,040	1865 .....	143,800
		1870 .....	287,680

These figures approximate the numbers contained in these cities, at the various dates, and cannot vary much from the result of the census of 1870.

The same ratio, carried forward to the year 1900, would give Toledo 1,249,280, and Chicago 18,411,520. This seems absurd. A duplication of Chicago, in periods of six years, would give 4,513,280. New York should then have about 6,600,000, and London about 5,000,000; allowing the former a continued duplication of fifteen years, and the latter of forty years. Thirty-two years seems quite too short a period for such great changes. If we suppose Chicago to slacken her rate of growth to a duplication in seven years, from the year 1870 to 1898, and then, in ten years, it will show thus :

1870.....	282,080	1898.....	4,513,380
1877.....	564,160	1908.....	9,026,560
1884.....	1,128,320	1918.....	18,053,120
1891.....	2,256,640		

Allowing Toledo a continued duplication in periods of six years, her numbers, in 1918, would be 9,994,240. These are large estimates, for fifty years. The reader will probably require fifty years, in addition, to satisfy himself that such numbers will be realized. The largest city, then, will be spread over a wide territory, and contain not less than one twentieth of the population of the whole country.

## APPENDIX C.

The seventeen Atlantic States, including Vermont and District of Columbia, increased in population, between 1850 and 1860, 2,759,659, on a basis of 13,406,441, being 21.35-100 per cent.

The seventeen Interior and Gulf States, with seven Territories, during the same time, increased 5,567,095 on a basis of 9,885,935, being at the rate of 56.41-100 per cent.

The six north-eastern States gained, from 1850 to 1860, 407,185.

The following shows the amount of increase, in the six north-western Lake States : Ohio, 359,270; Indiana, 362,368; Michigan, 351,458; Illinois, 860,283; Wisconsin, 476,482; Minnesota, 155,965. Total 2,559,529.

Six River States : Kentucky, 173,308; Tennessee, 107,130; Iowa, 482,006; Missouri, 491,273; Arkansas, 225,530; Kansas, 107,100. Total, 1,586,341.

Since 1860, the growth of the Lake States and Lake Cities have not failed to maintain the superior rate, compared with states and cities of the other sections of our country, as shown by the census of that year.

### POPULATION OF CITIES.

The following table exhibits the population of our ten largest exterior *seaport* cities, in comparison with the ten largest *interior* cities, in 1850 and 1860, showing their growth during that interval of time :

Exterior Cities.	1850.	1860.	INCREASE PER CENT.
New York, including Brooklyn and Jersey City.....	658,135	1,189,023	70
Philadelphia.....	408,762	568,034	39
Baltimore.....	162,313	214,036	32
New Orleans.....	119,461	168,472	41
Boston.....	136,881	177,902	31
Newark.....	38,849	71,941	85
Albany.....	50,763	62,368	23
Washington.....	40,001	61,400	52
Providence.....	41,513	49,914	17
Charleston.....	42,985	51,210	16
AGGREGATE.....	1,699,708	2,604,300	53

Ten Interior Cities.	1850.	1860.	INCREASE PER CENT.
Cincinnati.....	115,486	171,293	48
St. Louis.....	77,869	160,577	106
Chicago.....	29,903	109,430	265
Buffalo.....	42,261	81,541	93
Pittsburg, with suburbs.....	71,595	83,969	17
Louisville.....	43,194	69,740	62
Rochester.....	36,403	48,243	32
Detroit.....	21,019	46,834	122
Milwaukee.....	20,061	45,315	124
Cleveland.....	21,400	43,550	105
AGGREGATE.....	479,182	860,502	79

The following table gives the population, according to the United States Census Returns, of the ten most populous interior cities of the great central *river* region in comparison with the ten largest cities on the United States borders of the *great lakes*, in 1850 and 1860, with the percentage of growth, separately, and in the aggregate :

Ten Cities of the River Region.	1850.	1860.	INCREASE PER CENT.
Cincinnati.....	115,436	171,293	48
St. Louis.....	77,850	160,577	106
Pittsburg, with Alleghany and Birmingham.....	71,595	83,969	14
Louisville.....	43,194	69,740	61
Memphis.....	8,851	22,625	155
Nashville.....	10,165	16,987	67
Covington.....	9,408	16,471	75
Peoria.....	5,085	14,425	183
Quincy.....	6,911	13,718	98
Natchez.....	4,434	13,553	206
TOTAL.....	352,949	583,409	65

Ten Cities of the Lake Region.	1850.	1860.	INCREASE PER CENT.	ORDER OF GROWTH.
Chicago.....	29,293	109,430	265	1
Buffalo.....	42,261	81,541	93	7
Detroit.....	21,019	46,834	122	5
Milwaukee.....	20,061	45,325	124	4
Cleveland.....	21,400	43,550	105	6
Oswego.....	12,205	16,117	32	10
Toledo.....	3,829	13,768	260	2
Erie.....	5,840	11,113	90	8
Sandusky.....	5,087	8,408	57	9
Grand Rapids.....	3,147	8,058	156	3
TOTAL.....	164,811	384,148	133	

[FROM THE NEW YORK EVENING POST.]

The commerce of the great plain more and more seeks the lake ports in preference to the river cities. Of this fact any one can get the proofs by examining the commercial reports, during the last ten years, of the cities of St. Louis and Chicago, and of Cincinnati and Toledo. As between the old and new states, the balance of population is already slightly in favor of the new.

At the same rate of increase as from 1850 to 1860, these sections will contain, in 1870 : the Atlantic States, 19,253,512, and the new States, 24,170,084. At present, the urban and suburban population of the old free States constitutes about one-third of the whole number ; while in the new free States about five-sixth are engaged, directly or indirectly, in the cultivation of the soil. This disproportion is in process of rapid reduction.

In postage, Toledo stands among all the cities of the Union : according to number of papers delivered, as No. 8 ; number of delivered letters, as No. 20 ; number of collected letters, as No. 27.

## COMPARATIVE SALES OF WESTERN CITIES.

In Chicago, last year, fifty-six firms returned sales exceeding \$1,000,000, while there were fifteen each in St. Louis, Milwaukee and Cincinnati. In Chicago the number of firms whose sales exceeded \$2,000,000, was fourteen; in Cincinnati, four; St. Louis, one; Milwaukee, five. The heaviest sales reported by a single house in Chicago, were \$9,220,967; in Cincinnati, \$2,700,000; in St. Louis, \$3,127,223; in Milwaukee, \$5,824,000.

## VALUE OF MANUFACTURES IN THE UNITED STATES IN 1850 AND 1860.

According to the census returns, at these two periods, the capital employed in this department of our national industry was:

In 1850.....	\$ 527,209,193
In 1860.....	1,159,000,000

The number of hands employed was:

In 1850	} Males.....	719,479
	} Females.....	225,512
In 1860	} Males.....	1,100,000
	} Females.....	285,000

The value of the annual product was:

In 1850.....	\$1,013,336,463
In 1860.....	1,900,000,000

Establishments having an annual product of less than \$500 are not included in either census returns.

Increase of capital per cent. during the ten years:

In all the States and Territories.....	100 per cent.
In all the Southern and Southwestern States.....	80 " "
In the New England States.....	64 " "
In the Middle States.....	97 " "
In the Western States.....	152 " "

The percentage of increase in annual value of products:

In all the States and Territories.....	87 per cent.
In the Southern and Southwestern States.....	81 " "
In the New England States.....	80 " "
In the Middle States.....	70 " "
In the Western States.....	109 " "

Increase per cent in number of hands employed:

In all the States and Territories.....	} Males.....	51 per cent.
	} Females.....	26 " "
In the Southern and Southwestern States.....	} Males.....	30 " "
	} Females.....	10 " "
In the New England States.....	} Males.....	45 " "
	} Females.....	17 " "
In the Middle States.....	} Males.....	53 " "
	} Females.....	32 " "
In the Western States.....	} Males.....	55 " "
	} Females.....	96 " "

From the above figures it appears that the increase in males employed was nearly double that of females, for the whole country; and only in the Western States was the increase per cent. greater in females than males.

## APPENDIX D.

There is a philosophy of climatical influence, in the character of man, animals and plants which can be well developed, exemplified and illustrated, only, by a familiar knowledge of these departments of natural history. As I have not that knowledge, I will only express my belief that the best possible climate, for the attainment of their highest and best characteristics, is that which requires the exertion of their utmost powers to *overcome* the obstacles which it interposes to their development. Caucasian man has proved that climate, for himself, and the animals and plants promotive of his highest good, to be within a few degrees of the annual isotherm of 50 degrees Fahrenheit. The elevated, and, generally, barren plain of Arabia, produced a race so powerful that it, seemingly, makes an exception to the law above expressed, but the anomaly is only so when not understood. The Arab man and the Arab horse improved in character when transplanted to a colder climate with greater extremes of temperature.



## THE ZONE OF GREAT CITIES.

Disturnell, the geographer, in a paper read before the American Geographical and Statistical Society, of New York, in 1860, on the influence of climate, etc., on the growth of cities, gives a list of cities, with their population, in different zones of climate. In the middle zone, having a mean annual temperature between 48 and 52 degrees Fahrenheit, his list embraces most of the great cities of the world, having an aggregate population of 9,233,984. His list of cities in the northern zone, having a mean annual temperature between 40 and 48 degrees Fahrenheit, embraces an aggregate population of 2,819,418; and in the warmer zone, having a mean annual temperature between 52 and 60 degrees Fahrenheit, an aggregate of 5,850,000. The zone between 48 and 52 degrees is a narrow belt, the middle line of which passes through Astrachan, Odessa, Vienna, near Paris, through London, Liverpool, Dublin, New York. Toledo, near the south end of Lake Michigan, Omaha, on the Missouri, and bearing south in the elevated plateau of the continent, thence takes a north-west direction to the Pacific, at the south end of Van Conver Island. This zone is much wider in central and western Europe, and on the Pacific coast, than elsewhere. Its course through Asia, is nearly on the line of latitude of Pekin, and is not wide. The cities of the warm zone are making a slower growth than those of the coldest zone; but those in the middle temperate zone are growing much faster than either of the others. For example: London is put down at 2,357,765, and now contains over 3,000,000. Paris is set down at 1,153,262, whereas a recent enumeration gives it over 2,100,000. Chicago is set down at 100,000, and now has twice that number. New York and Brooklyn are set down together at 835,000, whereas they number at least 1,250,000. Other cities in this list have shown a similar growth. It will not be an over-estimate of this favorite city belt to set down its present city population at 12,000,000. This is greater than the city population of all the rest of the world, thus:

In the Torrid Zone.....	2,415,000
In the Warm Zone.....	2,819,418
In the Cold Zone.....	5,850,000
	11,124,418
Growth since 1860, estimated.....	500,000
	11,624,418

The current of population follows, nearly, lines of equal temperature, with a tendency to move from excesses of heat and cold toward the zone of 50 degrees Fahrenheit, mean annual temperature. This zone, according to Disturnell, has a mean width of less than two hundred miles. The north boundary-line of this zone passes through or near the following cities: Albany, Buffalo, Detroit, Racine, Sioux City, Fort Hall, Princess Royal Island, and through the middle of Queen Charlotte's Island of the Pacific. The south boundary-line, in North America, passes through or near the following places: Philadelphia; Columbus, Ohio; Springfield, Illinois; St. Joseph, Missouri; Santa Fee, Great Salt Lake, Dallas, Astoria. In Europe, its north line passes westward, a little north of the Sea of Asof, through the cities of Posen, Berlin, Hamburg, Newcastle, Glasgow, and Belfast. Its south line passes at the outlet of the Sea of Asof, near Buda, Munich, Orleans, and Cape Clear.

I give below figures made up from the U. S. census of 1860, exhibiting the operation of the power of climate on city growth, within the belt embraced within the iso-therm of 48 and 52 degrees Fahrenheit. This zone, varying in width from 120 to 200 miles, embraces but a small portion of our country, but it concentrates within its limits a much greater city population than all the broad expanse on both sides of it.

Population in 1860,.....	} Within the belt.....	4,312,700
	} Out of the belt.....	1,961,729

Within the favorite climate the cities have grown, since 1860, probably not less than 60 per cent. At this rate their present population amounts to 6,900,184.

At the rate of growth, estimated at 30 per cent., the city population, exterior to the favorite belt, has increased to 2,250,247.

DR. TREMBLEY's record of the temperature of the city of Toledo, as averaged for seven years, gives a small fraction above 50 degrees Fahrenheit. This accords with Blodgett's climatological table, and is, doubtless, correct.

The control of climate on the movement and settlement of civilized man, is a great fact worthy of consideration, and may be of great practical value to persons looking for permanent homes. To live where capital and people can work to greatest advantage is to live in the best place.

In Asia, the zone of great cities embraces but a few, of which Pekin is the only one of great importance.

The power of climate to control human movements and habitation, and concentrate in the region best adapted to the developement of the best energies of man, is manifested more and more as knowledge extends, and the means to remove to such best region, become more and more ample. The tide of human movement is westward. It has culminated, or is culminating, in Europe, on its extreme western verge, in the middle climate zone, in the great cities of England and France. New York, Philadelphia, Buffalo, Toledo, Detroit, Chicago, Davenport, St. Joseph and Omaha are on the route of the future movement.

The following tables are inserted for their general value, and not because they are considered germane to this general subject :

#### NEW YORK IN 1834 AND 1867.

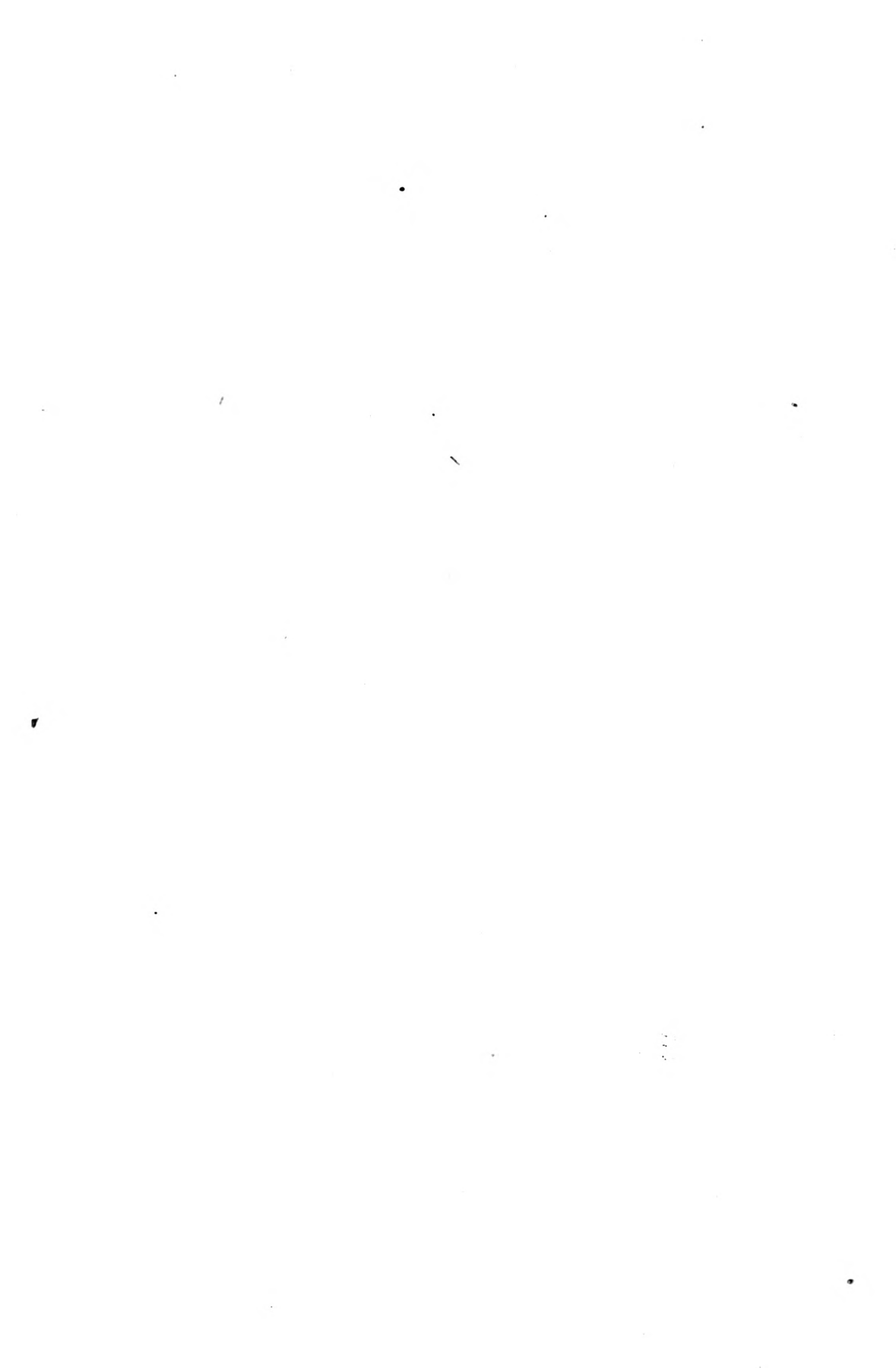
Thirty-three years. One generation. In 1834, the total valuation of the real and personal property of this city was returned by the assessor at one hundred and eighty-six millions. In 1867, the total valuation of real and personal property was returned at eight hundred and thirty million dollars—\$830,594,713.

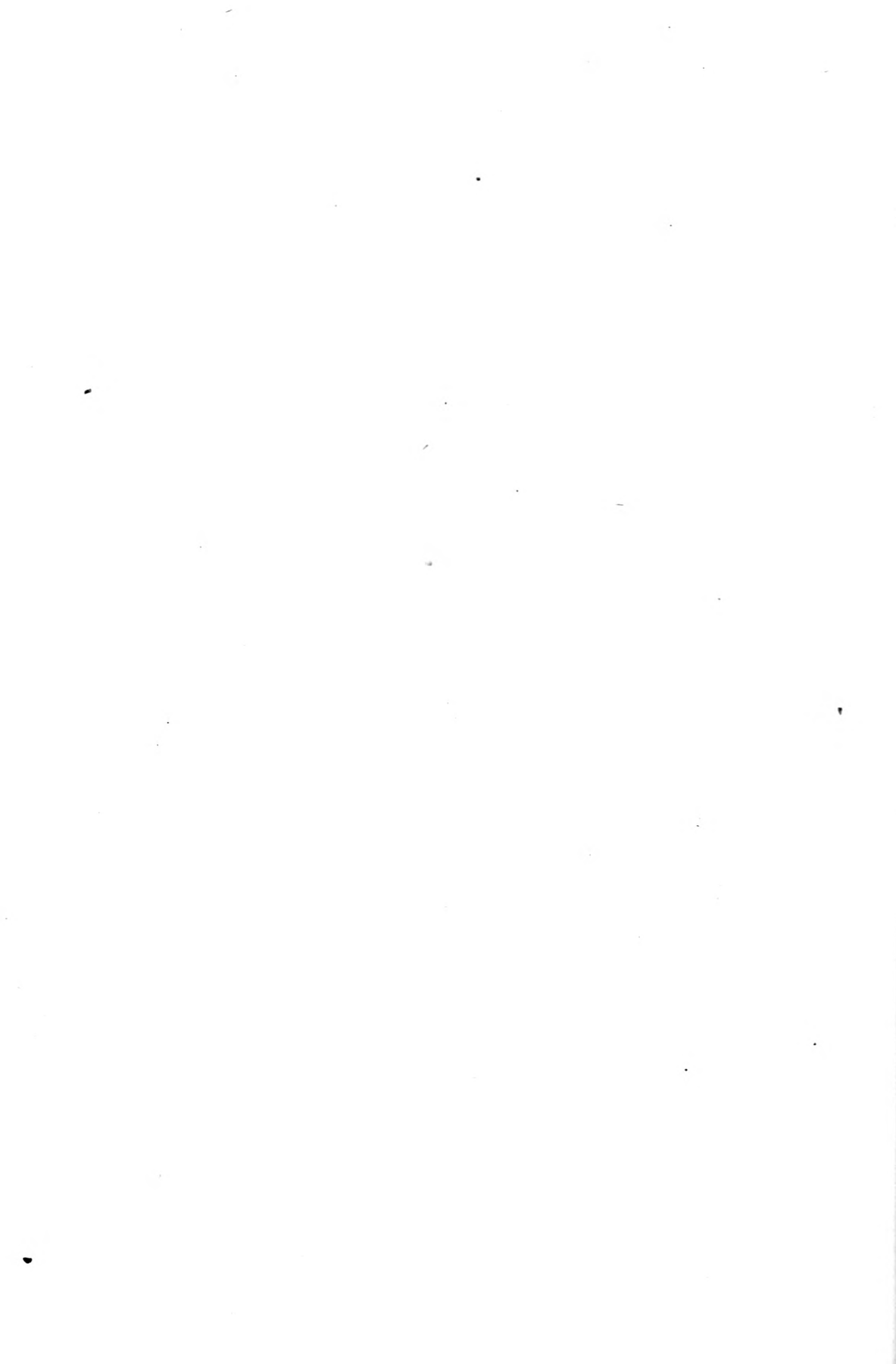
#### THE POPULATION OF EUROPEAN CITIES.

In 1866, censuses were taken in Great Britain and France, and the reports show the following population of the principal cities :

London.....	3,037,991	Bordeaux.....	194,241
Paris.....	1,825,274	Edenburg.....	175,126
Liverpool.....	484,337	Bristol.....	163,630
Glasgow.....	462,265	Lille.....	154,778
Manchester.....	358,855	Toulouse.....	126,936
Birmingham.....	355,798	Newcastle-on-Tyne.....	122,277
Lyons.....	326,954	Salford.....	112,904
Dublin.....	318,437	Nantes.....	111,956
Marseilles.....	390,131	Hull.....	105,233
Leeds.....	228,187	Rouen.....	100,670
Sheffield.....	218,257		

**RD - 4. 6.**

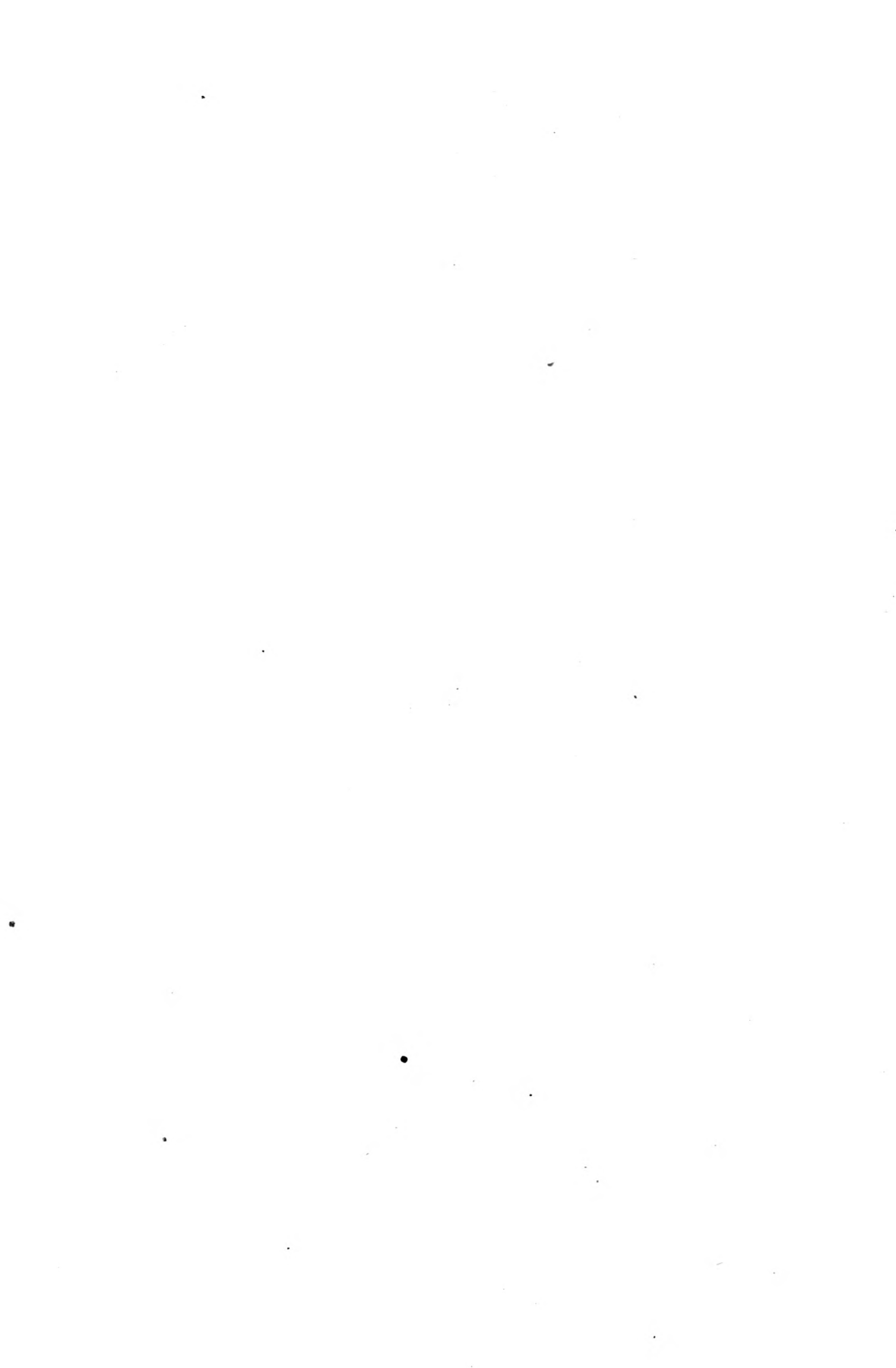










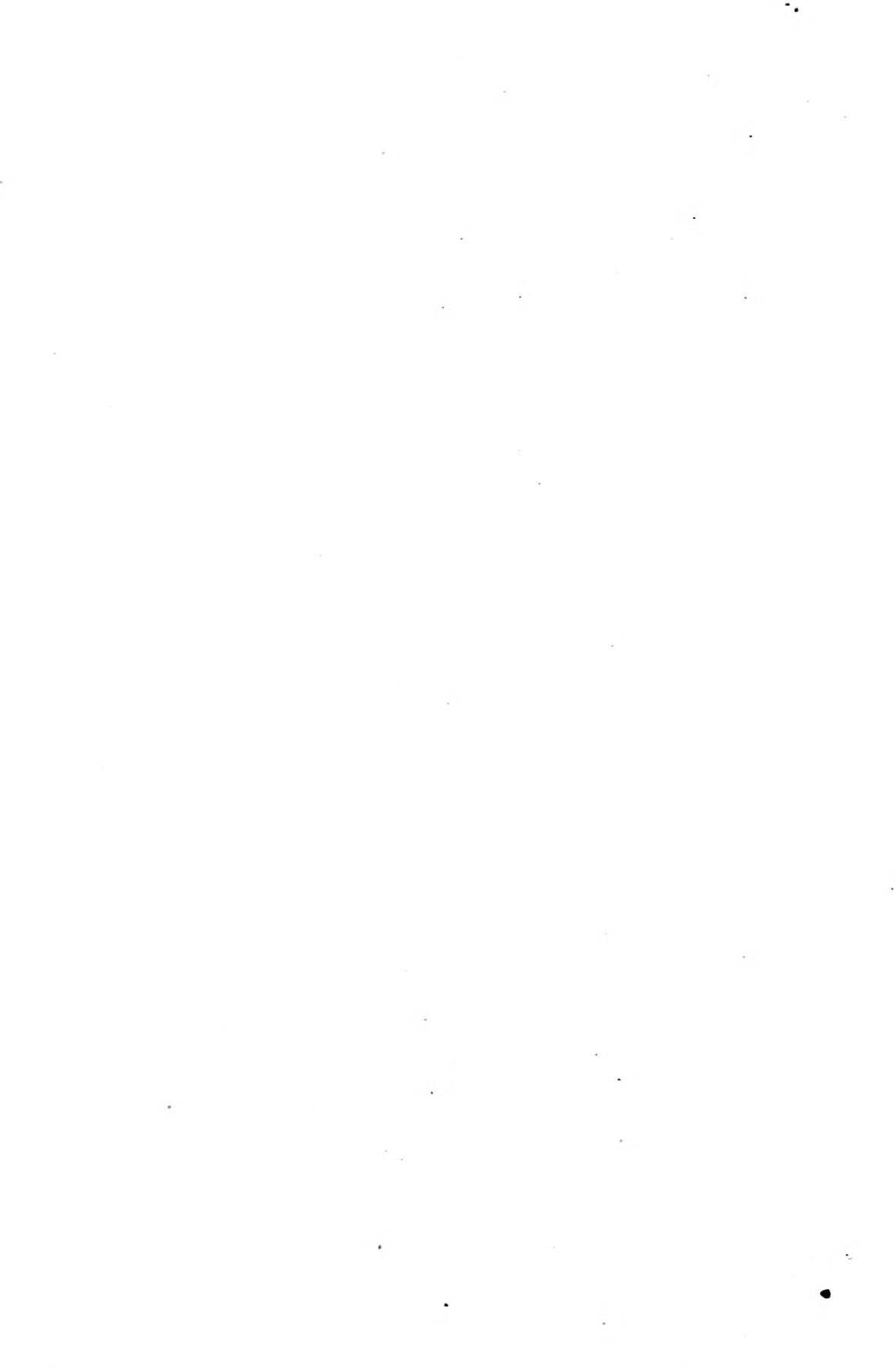


















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